Laboratory Training for Public Health And Clinical Laboratory Professionals

WHAT IS THE PUBLIC HEALTH PROBLEM?

- Public health and private clinical laboratories must be able to effectively respond to disease outbreaks associated with emerging infectious diseases, food-borne diseases, environmental hazards or bioterrorism and chemical terrorism events.
- Laboratories must adequately train personnel in the rapid recognition and prevention of the spread of communicable diseases, and respond to environmental threats.
- Laboratorians must be able to use state-of-the-art test systems and newly introduced technology to more effectively deal with health threats of public health significance.

WHAT HAS CDC ACCOMPLISHED?

CDC and the Association of Public Health Laboratories co-sponsored the National Laboratory Training Network (NLTN), which provides clinical, environmental, and public health laboratory training exercises to laboratory professionals located across the United States on topics of public health significance. The NLTN provides the nation's laboratory workforce with training in cutting-edge technology, such as that used in detection of agents of bioterrorism. The training occurs through the use of hands-on training in state-of-the-art laboratory settings.

The NLTN has developed a training program, "Newborn Screening Symposium – Collection, Reporting, and Follow-up" to address a high rejection rate of heel stick specimens improperly collected from newborns. In one state, an analysis of data collected three months prior to the training and three months following the training showed a decrease of over 7% in the rejection rate resulting in over 4,000 newborns who did not have to be re-stuck and who did not have their newborn screening for genetic disorders delayed.

Example of programs in action:

- In 2002, the NLTN provided 268 classroom and workshop training events to 8,500 participants. Training was provided to the sentinel laboratories (Level A) and confirmatory laboratories (Level B and Level C) that have the capacity to identify agents of bioterrorism.
- An interactive CD-ROM was developed to assist laboratorians in selecting and using appropriate testing methods to detect antimicrobial-resistant strains of bacteria. This CD-ROM provides the most extensive compilation of information on antimicrobial resistance testing available to date.
- Training in testing for newborn screening provides improved recognition, detection, diagnosis, and management of genetic disorders in newborns.
- A Bioterrorism (BT) Reference Guide was developed by CDC for use in the sentinel (Level A) clinical laboratories. It contains information on the isolation and identification of agents of bioterrorism. In addition, bioterrism training videos were developed, along with a BT "Job Aid" which can be customized by individual states.

WHAT ARE THE NEXT STEPS?

The CDC and the NLTN will continue to provide updated training to the nation's laboratorians to ensure the competency of the laboratory workforce and ensure high quality testing is being performed.

For information on this or other CDC programs, visit www.cdc.gov/programs *February 2003*